

REMARKS

Applicants have submitted a Substitute Specification to correct multiple minor informalities noted by the Examiner, plus several additional minor informalities noted by the Applicants.

Applicants respectfully traverse the objection to the drawings under 37 C.F.R. § 1.83(a). The “electric control unit” recited in claims 3 and 4 corresponds to the brake control unit 62 disclosed on page 19, lines 12-14 of the as-filed specification, and as shown in as-filed Fig. 5. No replacement drawings are needed. The objection to the drawings therefore is without foundation and should be withdrawn.

Applicants traverse the 35 U.S.C. § 102(b) rejection of claim 1 over Pluta, U.S. Patent 5,563,355.

The present invention is a vehicle brake apparatus, as recited, *e.g.*, in claim 1 and its dependent claims. Among other features of the invention recited in the claims, a variable output mechanism is provided between a brake operating member and an output member, for multiplying output force of the output member non-linearly in relation to an input force of the brake operating member. A load sensor is disposed between the variable output member and a reaction force unit for applying reaction force to the output member. The variable output mechanism non-linearly changes a multiplying ratio in relation to the input force of the brake operating member. The load sensor detects the force multiplied by the variable output mechanism, and the reaction force unit applies reaction force to the output member. The resulting brake operation in an electric-control brake apparatus feels similar to that of a mechanical-control brake apparatus. Applicants have amended claims 1-3 to more clearly recite the features of

the present invention, and have added new claims 6-13 to round out the claim coverage to which Applicants are entitled.

Pluta, in contrast, discloses a brake with a pedal arm 111 and a push rod 105, but does not disclose a variable output mechanism which changes a multiplying ratio non-linearly, as recited, *e.g.*, in claim 1. Pluta does not disclose that a mechanism comprising elements 101, 105, and 106 multiplies the input of the brake operating member non-linearly, as recited in claim 1. Furthermore, although Pluta discloses a load sensor 110, this load sensor detects operating force of the brake member, not output of a variable brake mechanism. Pluta also does not disclose a reaction force unit. Lacking at least the above elements recited in claim 1, Pluta does not anticipate claim 1 under § 102(b).

Applicants also traverse the 35 U.S.C. § 103(a) rejection of claims 1 and 2 over Masaharu, JP 2003-312457, in view of Pluta. Like Pluta, Masaharu also contains no disclosure of a variable output member changing a multiplying ratio non-linearly, or a load sensor detecting the output force of the variable output member. Even if a motivation existed to combine these two references, and Applicants do not admit that any such motivation exists, such a combination does not suggest all of the features recited in claims 1 and 2.

Applicants also traverse the § 103(a) rejection of claims 3-5 under Pluta in view of Poertzgen, EP 0 768 224. These claims depend from claim 1. Poertzgen discloses an electromagnetic valve 48 and a sensor means 36, but does not provide the features of claim 1, added herein by amendment, discussed above as missing from Pluta, so

again such combination, assuming solely for sake of argument that the references were combined, does not suggest the invention as set forth in the claims.

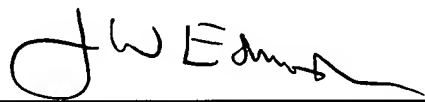
In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application, withdrawal of all rejections and objections, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: June 19, 2006

By: 
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Attachments: Substitute Specification and Marked-Up Substitute Specification